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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,604	06/13/2001	Yoshihiro Ishizaki	U013417-6	7019

7590

03/21/2003

Ladas & Parry  
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New York, NY 10023

EXAMINER

PATEL, NIHIR B

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 03/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/880,604

Applicant(s)

ISHIZAKI, YOSHIHIRO

Examiner

Nihir Patel

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 12-14 and 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5-11 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of group II (claims 1, 5-11, and 15) is acknowledged.
2. Applicant argues that figures 2 and 4 are related to embodiments of manufacturing processes. Therefore the species restriction should not apply to the elected apparatus claims and should be withdrawn. The examiner has found the applicant's arguments to be persuasive and the species restriction is withdrawn.

Claims 2-4, 12-14, and 16-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to method of manufacturing, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 112*

3. Claim 7 contains the trademark/trade name TEFLON and KEVLAR. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe material used to design a holding base and, accordingly, the identification/description is indefinite.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is insufficient antecedent basis for limitations "a refrigerator".

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The intended use statements are not given any patentable weight in this instance, for example "for a regenerator".

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spokoyny et al. US Patent No. 5,323,842 in view of Sellin US Patent No. 3,431,082.

Spokoyny discloses the applicant's invention as claimed with the exception of providing numerous granules such as balls, ships, and fine particles having a relatively uniform size which are made of one or a plurality of heat storing materials.

Sellin discloses a temperature-stabilized heat exchanger that dose provide numerous granules such as balls, ships, and fine particles having a relatively uniform size which are made of one or a plurality of heat storing materials (see figures 5 through 8 and column 5 lines 3-8).

Therefore it would be obvious to modify Spokoyny's invention by providing numerous granules such as balls, ships, and fine particles having a relatively uniform size which are made of one or a plurality of heat storing materials in order to make it easier to replace the granules in case it malfunctions during use.

Referring to claim 11, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The intended use statements are not given any patentable weight in this instance, for example "for a pulse-tube refrigerator".

Claim 5, 7, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spokoyny et al. US Patent No. 5,323,842 in view of Scarlata US Patent No. 4,355,627.

Referring to claim 5, Spokoyny discloses the applicant's invention as claimed with the exception of stating the type of material used to design the granules.

Scarlata discloses thermal storage system that does state the type of material used to design the granules (see column 4 lines 19-30). It is obvious to one in the ordinary skill of the art that well known material like copper is a heat conductive material and can be used make the granules required in Spokoyny's invention in order to obtain better heat transfer.

The applicant also states that the granules size range from 40 to 800  $\mu\text{m}$ . Since the applicant does not state the criticality of granules size it is simply a matter of design choice.

Referring to claims 7, 8, and 9, Spokoyny discloses the applicant's invention as claimed with the exception of stating that the holding base is designed from a fiber selected from a fiber selected from the group consisting of paraaramid fiber, high tenacity polyarylate fiber, PBO

fiber, polyethylene fiber, TEFLON fiber, polyester fiber, KEVLAR fiber, natural fiber, and glass fiber, and has so small a mesh that the granules do not pass through.

Scarlata discloses thermal storage system that does state that the holding base is designed from a fiber selected from a fiber selected from the group consisting of paraaramid fiber, high tenacity polyarylate fiber, PBO fiber, polyethylene fiber, TEFLON fiber, polyester fiber, KEVLAR fiber, natural fiber, and glass fiber, and has so small a mesh that the granules do not pass through (see column 8 lines 1-10). Therefore it would have been obvious to modify Spokoyny's invention by using a fiber selected from a fiber selected from the group consisting of paraaramid fiber, high tenacity polyarylate fiber, PBO fiber, polyethylene fiber, TEFLON fiber, polyester fiber, KEVLAR fiber, natural fiber, and glass fiber, and has so small a mesh that the granules do not pass through in order to provide a strong hold on the granules.

The applicant also states that the holding base is woven cloth having a thickness ranging from 10 to 100  $\mu\text{m}$ . Since the applicant does not state the criticality of the cloth thickness, it is simply a matter of design choice.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over combined Spokoyny et al. US Patent No. 5,323,842 in view of Lindner et al. US Patent No. 5,088,548.

Spokoyny discloses the applicant's invention as claimed with the exception of stating that granules are made of one or more of an alloy, which has high specific heat at low temperatures.

Lindner discloses a heat accumulator with expansion recess that does use alloys, which has high specific heat at low temperatures. Therefore it would be obvious to modify Spokoyny's invention by providing alloys, which has high specific heat at low temperatures in order to provide better heat transfer.


The applicant also states that the granules size range from 40 to 800  $\mu\text{m}$ . Since the applicant does not state the criticality of granules size it is simply a matter of design choice.

***Conclusion***

45. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nihir Patel whose telephone number is (703) 306-3463. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful the examiner supervisor Henry Bennett can be reached at (703) 308-0101.

NP  
February 6, 2003

  
Henry Bennett  
Supervisory Patent Examiner  
Group 3700